

Plant Species of Concern and Plant Associations of Powder River County, Montana

Prepared for the
Bureau of Land Management

by
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and Susan Crispin**

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EXECUTIVE SUMMARY

Southeastern Montana, including Powder River County, has some of the most extensive range landscapes in the state. A long history of ranching as the predominant land use and effective land stewardship have maintained or restored extensive areas that support good quality rangelands with healthy, diverse populations of native wildlife and high ecological integrity. However, the biological character and richness of this region has not been well documented. The goal of this project was to survey Bureau of Land Management (BLM) lands in Powder River County for plant species of concern and document the natural vegetation on these lands, including communities of limited range and outstanding examples of more widespread community types.

Our survey work emphasized major blocks of land administered by the BLM, but also included other public lands near or continuous with BLM blocks. We visited most BLM tracts of at least five contiguous sections, as well as select scattered tracts, and adjacent private lands with landowner permission. We occasionally also surveyed on nearby state lands that were part of BLM allotments.

Surveys were conducted in the summers of 1999 and 2000. To document vegetation communities, we sampled a broad range of habitat types throughout the geographic breadth of BLM-administered lands in the county. Surveys ranged from the most rugged topography to flat lands and from the most heavily wooded to the least vegetated. We focused more detailed data collection on excellent representative areas of common vegetation types, those types of limited distribution and/or potential statewide or range-wide significance, and types not previously known or documented to occur in southeastern Montana. In surveying plant species of concern, we particularly emphasized species of global or range-wide significance.

All new data on plant species of concern and vegetation communities were geo-referenced, digitized and entered into the Montana Natural Heritage Program (MTNHP) data system, making them readily available to the BLM, as well as other landowners, resource managers and decision-makers, both public and private.

The results of these surveys doubled (from 5 to 10) the number of Montana plant species of concern documented in the County. Based on the number of new populations discovered, one species has been dropped from the Montana Species of Concern list, another is recommended for possible downgrading, and we recommend that four species be considered for removal from BLM "Watch" status.

We also documented a total of 46 native vegetation types in Powder River County. Several of these are particularly well-represented or of significance on BLM lands, either because of their extent and good condition and/or because they represent types that are uncommon or range-limited. In addition to collecting data from vegetation plots to better document and understand these communities, we also identified six notable areas where one or more were particularly well-represented in good or excellent condition, within ecologically intact landscapes.

While this study added a great deal to knowledge of the vegetation and ecology of Powder River County, it is far from comprehensive. We would recommend that inventory work be expanded to include fauna as well as flora, and to encompass lands under other ownerships to gain a more complete and accurate frame of reference for understanding the biological resources and ecology of this remarkably healthy and intact native landscape.

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A number of Heritage Program staff contributed to production of this report. Cedron Jones and Duane Lund designed and produced the maps; Martin Miller, Terrie Kenney, Joy Lewis, and Coburn Currier, helped with data processing and production, and Steve Cooper contributed to final editing.

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